

# **Santa Cruz County Weed Management Area Supplemental Project Proposal**

## **WMA Supplemental Proposal COVER SHEET**

### **Executive Summary:**

The Santa Cruz County WMA (WMA) is a cooperative effort among local organizations, private landowners, federal, state and local land managers, resource agencies, and local governments. WMA partners work under a Memorandum of Understanding (MOU) to meld priorities, strategies, and resources, into a unified approach to implement an annually revised Strategic Plan (Plan). The Plan defines the WMA's goals and objectives and outlines actions to suppress the spread of noxious weeds, prioritizing prevention, early detection, and an integrated management approach. *The mission of the Santa Cruz County Weed Management Area (WMA) and its partners is to coordinate activities necessary for the prevention, detection, control, and eradication of noxious and non-native invasive weeds in Santa Cruz County.*

### **Your WMA's TOP THREE Accomplishments over the past 2 years:**

1. Reinvigoration of a local WMA, which had been inactive for over a decade, with enthusiastic partner organizations taking an active leadership role.
2. The compilation of geographic data high priority invasive areas and sensitive habitat, enabling WMA partners to better monitor and respond to invasive weed population outbreaks.
3. The implementation of five eradication projects targeting satellite populations to protect sensitive habitat for endemic species, including the unique Sandhills habitat.

### **Summary of Methods Used:**

The SCCWMA is successful in the ability to reduce or eliminate the potential impacts resulting from the introduction, establishment or spread of invasive species through a coordinated effort. Outreach and education, combined with technical and financial assistance have proven the best method for reducing the extensive ecological, economic and cultural impacts of invasive weeds.

### **Summary of Net and Gross Acres:**

**Estimated Net acres or number of plants proposed to actually treat:** 105 acres

**Gross acres proposed to survey/cover while conducting treatments:** 180 acres

**Estimated Total Cost per acre for proposed treatments:** \$615 per acre

### **Summary of In-Kind Contributions toward the Project:**

In-kind personnel services include planning, project management, and coordination of volunteers by SLVWD's Environmental Analyst (\$18,700) and GIS mapping by SLVWD's GIS Technician (\$3,600). Additionally, volunteers will assist in invasive removal efforts (\$4,500). Funds

provided by USFWS for previous phases of the project (\$1,440) will be used as match for a total of \$28,240.

In-kind operating expenses include supplies for staff and volunteers (\$1,500) and mileage (\$350) for a total of \$1,850.

In-kind overhead for the SLVWD for the two-year funding is \$3,009. The combined total of all in-kind services is \$33,099.

## **WMA Group: Santa Cruz County Weed Management Area**

**Project Title:** **Acacia eradication and broom containment within the San Lorenzo Valley District's Olympia Wellfield-\$31,372.**

### **Priority Topic Area Being Addressed: High-value site**

The 180-acre Olympia Wellfield property, owned and managed by the San Lorenzo Valley Water District (SLVWD), contains 105 acres of Sandhills communities, including 49 acres of the Sand Parkland community of which only 250 acres remain in the world. These extremely rare communities have been invaded by acacia (*Acacia dealbata* and *A. decurrens*), French broom (*Genista monspessulana*), and Portuguese broom (*Cytisus striatus*). These invasive exotic species pose a major threat to the recovery of four federally endangered species that are known to occur on the site: Mount Hermon June beetle (*Polyphylla barbata*), Zayante band-winged grasshopper (*Trimerotropis infantilis*), Ben Lomond wallflower (*Erysimum teretifolium*), and Ben Lomond spineflower (*Chorizanthe pungens* var. *hartwegiana*).

This property is also a high-value site because it functions as the recharge area for the SLVWD groundwater wells located on the property. As such, it serves as a domestic water source for approximately 18,000 people of Ben Lomond and Boulder Creek. The SLVWD recognizes that keeping native ecosystems intact is the best way to preserve the valuable ecosystem services provided, including water filtration and water supply.

### **Project Goal:**

The long-term goal of this ongoing project is to enhance existing Sandhills and Sand Parkland communities on ~105 acres of the property by permanently removing all acacia (*Acacia dealbata* and *A. decurrens*) and by containing French broom (*Genista monspessulana*) and Portuguese broom (*Cytisus striatus*). The goal of this phase (Phase 4) of the project is to eradicate residual acacia from scattered stands on ~10 acres not treated in Phases 1 through 3 and throughout the entire 105 acres, to re-treat acacia as needed, and to strategically contain broom.

### **What are the project's long-term benefits and/or region-wide significance?:**

Despite the impacts of historic sand mining and invasion of non-native plants, the Olympia Wellfield site still supports the rare Sandhills and Sand Parkland communities and four federally listed species. Removing infestations of exotic plants will increase the area of suitable habitat, and thus the size and viability of the populations of each species. This is essential for the long term success of the Zayante band-winged grasshopper and the Ben Lomond wallflower, which are known from only five and 11 occurrences, respectively.

### **Project Objectives and Methods:**

Methods for this phase of the project (Phase 4) will be the same as those previously approved for the site by USFWS and have been successful in previous phases of this project. Project objectives include the following:

**Task/Objective 1:** Identify/ map all remaining stands of acacia on the property (January 2011). Project consultant, Ken Moore, to identify remaining acacia trees, mark with GPS, and map.

**Task/Objective 2:** Identify/ map areas of recovering Sandhills/Sand Parkland where broom invasion is a threat (July 2011). Consulting Sandhills/Sand Parkland expert, Dr. Jodi McGraw, to identify areas where broom invasion has occurred or is likely to occur.

**Task/Objective 3:** Treat acacia (January-March 2011 and 2012). Project consultant, Ken Moore, to cut, stem-treat with AquaMaster herbicide. Trained contractors to pile and burn.

**Task/Objective 4:** Strategically control broom within the property (January 2011- March 2012). Project consultant, Ken Moore, to cut and stem-treat large plants; flame newly sprouted seedling; train and oversee volunteers in hand-pulling smaller plants, pile. Trained contractors to burn.

**Task/Objective 5:** Identify previously treated acacia that has resprouted; re-treat with herbicide application (October- November 2011 and 2012). Ken Moore, to revisit all previously treated sites, inspect, and re-treat as needed. Resprouts to be located with GPS and mapped.

### **Performance measures:**

**How will you quantitatively monitor your project? *Distinguish between year one goals versus long term goals following treatment.***

To retain consistency throughout all phases of the project, this phase (Phase 4) of the project will use the same monitoring methods as defined by the USFWS in an awarded 2009 USFWS Partners Grant. For acacia and French broom, all remaining trees and stands will be marked with GPS and mapped, will be treated early in the winter and re-visited in the fall of the same year. The same schedule will be implemented in the second year to ensure 100% eradication. For long-term goals following treatment, photo monitoring will be used to document project completion, evaluate effectiveness, and inform the need for follow-up treatments to attain project goals and objectives. To document pre-treatment conditions, a photopoint will be established and its location recorded using a GPS within each distinct patch of invasive plant occurrences. After the first year of Phase 4 is completed (2011), the photopoints will be re-occupied, and new photopoints will be established within the treatment areas, as necessary to facilitate monitoring of seedling establishment and effectiveness of the follow-up treatments. All photopoints will be re-occupied during spring of each year to examine effectiveness of the project treatments at controlling invasive species, and recolonization of the habitat by native plant species.